BRUHAT BANGALORE MAHANAGARA PALIKE

Project:Improvements to Sanitary works in Ward No.08, Kodigehalli

Est Cost: = 7.50 Lakhs

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	**Cutting road surfaces** for pipeline trenches and disposing of the excavated stuff as directed including barricading, danger lighting etc. in the classifications for:. in the following classifications. **Cutting Asphalt Road (BWSSB SR 16-17, P.9 I No.16)**								
	Sanitary work	Cum							
			1	180.00	0.90	0.30	48.60		
	Deduct Man hole		-6	1.20	0.90	0.30	-1.94		
						Total Quantity	**46.66**	894.00	**41710.00**
2	**EXCAVATING FOR PIPE LINE TRENCHES OF REQUIRED WIDTH** by mechanical / & manual means including dressing sides, ramming of bottoms, providing barricading, danger lighting, shoring,strutting, dewatering, etc. IN ALL KINDS OF SOIL MIXED WITH BOULDERS of 30 cms size, etc. for: **Pipes of all dia. for depth upto 2.0 M in all types of soils(BWSSB SR 17-18, P.51, I No.1.1)**								
	Sanitary work	Cum							
			1	180.00	0.90	1.50	243.00		
	deduct Manhole Qty		-6	1.20	0.90	1.74	-11.28		
						Total Quantity	**231.72**	167.00	**38698.00**
3	Supplying, lowering, laying, jointing, testing and commissioning of **Glazed Stone Ware Pipes** of following dia, conforming to IS 651:1992,IS 4127 with latest amendments, including conveying to work site, caulking with hemp dipped in tar and jointing with CM 1:1.5 using OPC, perfect linking and curing for 10 days and testing with water etc. with all lead, lifts and as per Technical Specifications. The cost to include the cost of all jointing materials, necessary survey works for laying of sewer lines etc. complete. The contractor will make own arrangements for procuring water for testing. **230 mm dia. pipes(BWSSB SR 17-18, P.157 I.No 3.4)**								
	Sanitary work	Rmt							
			1	180.00			180.00		
	deduct Manhole Qty		-6	1.20			-7.20		
						Total Quantity	**172.80**	523.00	**90374.00**
4	**Labour charges for laying and jointing glazed stone ware pipes of 0.6m length** and of specified dia., of tested quality conforming to IS 651 of 1965 including caulking with hemp yarn, jointing with CM 1:2 and testing with water etc. complete for: (Rate to include cost of jointing materials and transportation of pipes from store work site but excluding the cost of earth work) - **Glazed Stone Ware pipe of 230 mm dia (P.No 159 I .No.7.3 BWSSB 2017-18)**								
	Sanitary work	Rmt							
			1	180.00			180.00		
	deduct Manhole Qty		-6	1.20			-7.20		
						Total Quantity	**172.80**	108.00	**18662.00**

Sl.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
5	Providing house connection with excavation in all types of soils without damaging the other utilities and supplying and laying 25 mm OD MDPE pipe (PE80) manufactured in accordance with ISO4427 - 1996 with minimum required strength of 8 Mpa, hydraulic design stress of 6.3 Mpa and with minimum wall thickness of 2.3 mm by making the bore of 15 mm dia. size on the Board's supply mains of 100 mm dia. using drilling bits or machines only and laying the pipe line at a depth not less than 0.45 mtrs. from the road surface, including providing 40 mm dia. "A" class GI pipe as casing over the MDPE pipe from the bore point and upto the entrance of the premises and removing the stone slab covering of the drain and dismantling the size stone masonry wherever necessary and making bore in the wall of the premises. On entering the premises, connection should be continued with 20 mm GI pipe by making "U" shape for the meter point below the ground level by making pit with sufficient space for the easy installation and removal of the water meter and providing vertical stand pipes on both sides of the mater. The connection should be secured firmly on the Board's main pipe with SS / Brass . ferrule of size 1/2" x 3/4" and fixing the union joint and gate valve / stop cock before the meter point and a reflex valve / non-return valve should be fixed on the connection after the meter point. (All these fixtures should be of standard quality conforming to IS). The compression fittings for MDPE pipes conforming to ISO 14236 and its latest versions. The excavated trench should be refilled with soft selected earth and the dismantled masonry of the drain should be re-constructed with available size stones in CM 1:8 and providing coping in CC 1:3:6 wherever required and the stone slab covering should be refixed in position with pointing in CM 1:3 and also the bored wall of the premises should be re-done to the original position and the rates are inclusive of the cost of all the materials, cement, sand water etc., required for these works. The road suface should be compacted well and brought to the original condition and the excess earth or debris should be disposed off to a distance with an initial lead of 10 Kms. etc. complete for: **For minimum length of 2.0 mtrs.(BWSSB SR 2017-18, P-68 I-53.1)**								
	In Kodgehalli	Nos/Rmt	63.00				**63.00**		
							63.00	241.00	**15183.00**
6	**Construction of granular sub-base Grading-V as Sub-base** and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision. (SR 2018-19, P-280 I-20.5)								
	Sanitary work	Cum							
			1	180.00	0.90	0.15	24.30		
	deduct Manhole Qty		-6	1.20	0.90	0.15	-0.97		
						Total Quantity	**23.33**	1730.94	**40379.00**
	Basic rate	1458.00							
	Area Weightage 6%	87.48							
	Sub Total	1545.48							
	12% GST	185.46							
	Final Rate	**1730.94**							
7	KSRRB M400-17. Providing, laying, spreading and **compacting cushed stone aggregates of** granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406 (**SR 2018-19) Item No 20.18, Page No 155**								
	Sanitary work	Cum							
			1	180.00	0.90	0.25	40.50		
	deduct Manhole Qty		-6	1.20	0.90	0.25	-1.62		
						Total Quantity	**38.88**	2241.43	**87147.00**
	Basic rate	1888.00							
	Area Weightage 6%	113.28							
	Sub Total	2001.28							
	12% GST	240.15							
	Final Rate	**2241.43**							

Sl.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
8	KSRRB M 500-6, Providing and applying **primer coat** with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 **(P.No.158, I.No.21.6 of PW,P&IWTD SR 2018-19)**								
	Sanitary work	Cum							
			1.00	180.00	0.90		**162.00**		
	deduct Manhole Qty		-2.00	1.20	0.90		**-2.16**		
						Total Quantity	**159.84**	40.36	**6452.00**
	Basic rate	34.00							
	Area Weightage 6%	2.04							
	Sub Total	36.04							
	12% GST	4.32							
	Final Rate	**40.36**							
9	KSRRB M500-7 : Providing and applying **tack coat** using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 **(P.No.161 I.No.21.7 of PW,P&IWTD SR of 2018-19)**								
	Sanitary work	**Cum**							
			1.00	180.00	0.90		**162.00**		
	deduct Manhole Qty		-2.00	1.20	0.90		**-2.16**		
						Total Quantity	**159.84**	16.62	**2657.00**
	Basic rate	14.00							
	Area Weightage 6%	0.84							
	Sub Total	14.84							
	12% GST	1.78							
	Final Rate	**16.62**							
10	KSRRB M500-16. Providing and laying **dense bituminous macadam 50-75mm** compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 **(P.No.163 I.No. 21.17.6 of PW,P&IWTD S.R 2018-19)**								
	Sanitary work	**Cum**							
			1.00	180.00	0.90	0.05	**8.10**		
	deduct Manhole Qty		-2.00	1.20	0.90	0.05	**-0.11**		
						Total Quantity	**7.99**	8647.56	**69111.00**
	Basic rate	7284.00							
	Area Weightage 6%	437.04							
	Sub Total	7721.04							
	12% GST	926.52							
	Final Rate	**8647.56**							
11	KSRRB M500-19. Providing and laying **bituminous concrete 30-40 mm** compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 **(P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2018-19)**								
	Sanitary work	**Cum**							
			1.00	180.00	0.90	0.04	**6.48**		
	deduct Manhole Qty		-2.00	1.20	0.90	0.04	**-0.09**		

Sl.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
						Total Quantity	**6.39**	10057.96	**64307.00**
	Basic rate	8472.00							
	Area Weightage 6%	508.32							
	Sub Total	8980.32							
	12% GST	1077.64							
	Final Rate	**10057.96**							
12	Refilling pipeline and foundation with selected trenches available earth form trench excavation and foundation inlcuding 5 watering, consolidation in layers of 15cms., thickness including disposing off the surplus earth with all leads & lifts.**(BwsSB SR 2016-17, P-9 I-2)**								
	Sanitary work	Cum							
	Qty Same as 2						231.72		
	Deduction								
	Pipe Volume	0.7855	-1	180.00	0.23	0.23	-7.48		
	WMM Qty						-38.88		
	GSB Qty						-23.33		
						Total Quantity	**162.04**	62.00	**10046.00**
13	EXCAVATING FOR PIPE LINE TRENCHES OF REQUIRED WIDTH by mechanical / & manual means including dressing sides, ramming of bottoms, providing barricading, danger lighting, shoring, strutting, dewatering, etc. IN DISINTEGRATED ROCK, SOFT ROCK, SOFT SHALE AND MEDIUM HARD ROCK COMPRISING OF LIME STONE, SAND STONE, HARD SHALE, SCHIEST, FISSURED ROCK without resorting to blast etc. for:Pipes of all dia. for depth upto 2.0 M Note : If any shoring and strutting, will be paid separately:.**(BWSSB SR 2017-18, P-51 I No-2.1)**								
	Rock Cutting	Cum							
			1	18.00	0.87	2.00	31.41		
						Total Quantity	**31.41**	404.00	**12691.00**
14	Dismantling the damaged or collapsed manhole of 4" dia conical in shape and reconstructing the same with machine made wire 6 brick in CM (1:4) as per design and specification of new cut manhole 4" dia with old frame and cover excluding bed concrete 13.6 (RwssR SR 2016-17, P-97, I-92 MTR DEPTH								
	1mt Depth Manhole	Nos							
	Manhole raising		10				10.00		
						Total Quantity	**10.00**	7358.00	**73580.00**
15	Providing and constructing "wire cut brick manhole chambers" using sulphate resistant cement, conical in shape at top with C.C. 1:3:6 foundation using 40 mm and down size graded metal of approved quality and with an offset of 0.15 m alround the chamber and brick masonry in C.M. 1:4 plaster with wire cut bricks of approved quality and CM plaster 1:3 proportion 12 mm thick inside and outside except for the conical surface outside where the thickness of plaster shall be 20 mm thick, with 1:6 slope in the concrete towards the central drain, finished smooth and fixing of pipes in CC 1:2:4 graded metal of 20 mm and down size including conveying to work spot supplying & fixing SFRC manhole frame and cover confirming to IS:12592 with latest amendments in CC 1:2:4, supplying and fixing of minimum 3 mm thick encapsulated plastic footsteps (as per IS 10910) on 12 mm dia, Grade Fe-415 steel bar (as per IS 1786) staggered at 30 cms apart as detailed in Technical Specifications and as directed, watering, curring, barricading, danger lighting, pouring tar over MH frame and cover, cost of tar, shoring, strutting, dewatering, engraving manhole No. with flow irection on the inner conical surface etc., as per the drawing with wire cut bricks as per technical pecifications for the following diameters & depths by using Ordinary Port Land Cement. (inclusive of earthwork for all types of soil) (BwsSB SR 2017-18, P-80 I-83)								
	1.2 m diameter manholes	Nos							
	For 1.5 m depth		5				5.00	21479.00	**107395.00**
16	Disposong off the excess excavated earth of all type up to a distance mentioned Every Km beyond 5 KM 8 Considering 10 Km below by vehicle including loading unloading with all lifts labour HOM of machinery etc., complete (BWSSB SR 2016-17, Pg-10, Item-7)								
	Concrete Dismantling Qty	Cum					46.66		

Sl.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
	Pipe Volume						7.48		
	WMM Qty						38.88		
	GSB Qty						23.33		
						Total Quantity	**116.34**	147.00	**17102.00**
17	Hire Charges for 2HP dewatering pump to bail out water at leaking pits inclusive of hire charges etc, complete Rs.1300/- per day of 8hours shift per day (BWSSB SR 16-17 Sl.No-4, P-34)								
		Days					30.00		
						Total Quantity	**30.00**	1300.00	**39000.00**
								Total Construction Cost	**734494.00**
		Cost towards Preparation of DPR and PMC / Third Party inspection LS							**14,690.00**
								Sub Total	**749184.00**
								G.Miscellaneous and rounding off	**816.00**
								Total	**750000.00**

Certificate.

1 The workspot was inspected and work is found to be necessary.
2 The area comes within the Bruhat Bangalore Mahanagara Palike limits.
3 The rates adopted based on the BWSSB SR 2016-17, BWSSB SR 2017-18 and PWD SR, Bangalore circle for year 2016-17.
4 The provisions made in the estimate are necessary and essential.

Assistant Engineer | Assistant Executive Engineer | Executive Engineer

Administrative Approval

Accorded For Rs 7.50 lakhs only
Head of A/C P3295
CER NO : 08 Dt: 22.05.2020

TA | CE (YNK)

TECHNICAL SANCTION

Accorded For Rs. 7.50 lakhs only
Head of A/c. P3295
Div. Ref. No. 71/20-21 Date. 26/5/2020

AE 26/05 | EE(BTP) 26/05